

# Work Order ID 48670B

Friday, June 26, 2009 9:20:40 AM



Page 1

Item ID: D412-694-02

Accept



Setup Start



Revision ID: C1

Stop



Item Name: Door Assembly

Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev. Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D412-694

Rev C1

100

0.00



✓ DOCUMENT CONTROL

DC

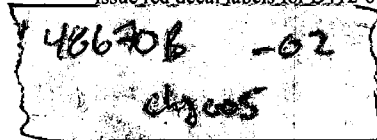
Memo

0.00

Document Control

Issue red decal labels for D412-694-02.

CHG005



110

0.00



✓ COMPOSITE ASSEMBLY

Small Fab

Memo

0.00

Small Fab

D412-694-02 Drill Process □ 1- D412-694-02 Drill Process Drill (7) holes using Ø(#40) drill. Drill (3) holes top/bottom Ø(#40) for insert (do not pass thru) using B30-23000-02 as per Dwg D412-694 page 4 (view P). □ 2- Open (1) hole to 11/16" (0.688) for the

120

0.00



✓ COMPOSITE ASSEMBLY

Small Fab

Memo

0.00

Small Fab

1- Install inserts as per Dwg D412-694 page 2 (view G-G); page 6 (view H, J, L, M, Q). □ 2- Sand flush excess Hysol around the insert on both doors.

ET 09-10-03  
09 10 03

ET 09-10-03  
09 10 03

EA934A/B M110 970  
M112 099

W/O: 48670B		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
09.10.06	120	DUE TO LACK OF POTTING COMPOUND, SUBSTITUTE QTY(6) 80-005-2-8 INSERTS W/ QTY(6) ALS4-1032-130 B/N <u>M111779</u> & RTV 732 B/N <u>M112832</u> OK per DS email attached		09/10/06	1	 09.10.06 per DS/UMZ	 05.10.07
09.10.07	160	Added nut per NCR below.		09/10/07		 09.10.07	 09.10.07

Part No: D412-694-02 PAR #: \_\_\_\_\_ Fault Category: prod-eng-coord. NCR: Yes (No) DQA: Date: 09.10.14  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09.10.07	160	Qty 4 MS21072-L3 nut is missing in pick list. RC: COSS → Intuitive transfer.	 DS/UMZ	Add missing nut Qty 4 per IIN D412-694 pg 18/18	 09-10-07	 09.10.07 Parts are in the BO M. Qty 4 personally checked!!	 DS/UMZ	 05.10.07

NOTE: Date & initial all entries



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Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

160

0.00



COMPOSITE ASSEMBLY

Small Fab

Small Fab



Memo

0.00

D412-694-02 Assembly Process ☐ 1- Install D3162-041 as per Dwg D412-694 page 4 (view R-R/S-S) and D3156-1 bracket as per (view T-T/U-U). Open holes to #30 (0.128) for rivet and alodine the open holes. ☐ Note: Start installation window side. Wait to fix D316

091007  
09-10-07

170

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

1

09-10-07

180

0.00



COMPOSITE ASSEMBLY

Small Fab



Memo

0.00

D412-694-02 Assembly Process (Continued) ☐ 1- Install D3116-7-0680 Seal and doublers. Transfer slot opening in the seal as per Dwg D412-694 page 2 (view V-V and N). ☐ Note: If this is the D412-694-013, wait until the VIP trim is fixed on the door. ☐ 2- Install

091007  
09-10-07

**Work Order ID 48670B**

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Item ID: D412-694-02

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Setup Start



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Stop



Item Name: Door Assembly

Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  QC Quality Control	✓QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00				1			09-10-07
200  Small Fab Small Fab	✓COMPOSITE ASSEMBLY  Memo 1- Finish installing D3163-042 in the door. 2- Install red decal before closing cover.	0.00  0.00				45	09	10-07	
210  QC Quality Control	✓QC5- Inspect part completeness to step on W/O  Memo Install door on mock up helicopter to insure proper fit and function.	0.00  0.00				1			09-10-07

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Item ID: D412-694-02

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Setup Start



Revision ID: C1

Stop



Item Name: Door Assembly

Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

220

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

230

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

u 07-10-07

# Picklist Print

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Friday, June 26, 2009 9:20:38 AM

Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly

Comments:

Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ NAS43DD3-14		Purchased	No			120	Each	0.0000	6.0000			
Spacer												
✓ 80-005-2-8		Purchased	No			160	Each	0.0000	55.0000			
Insert												
✓ AN525-10R6		Purchased	No			160	Each	0.0000	12.0000			
Screw												
✓ AN525-10R7		Purchased	No			160	Each	0.0000	8.0000			
Screw												
✓ AN960JD10L		Purchased	No			160	Each	0.0000	18.0000			
Washer												
✓ AN960JD10LL		Purchased	No			160	Each	0.0000	15.0000			
Washer												
✓ AN960JD416L		Purchased	No			160	Each	0.0000	6.0000			
Washer												
✓ AN960JD8		Purchased	No			160	Each	0.0000	6.0000			
Washer												
✓ BSP45		Purchased	No			160	Each	0.0000	79.0000			
Commercial Rivet												

19347 SP  
 (20X) (35X) SP  
 M112439 M19443  
 M101203 SP  
 M112411 SP  
 M109632 SP  
 M19600 SP  
 M110153 SP  
 M111578 SP  
 M107296 SP  
 9/9/17 @

# Picklist Print

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Friday, June 26, 2009 9:20:39 AM

Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly










Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ BSP46 		Purchased	No			160	Each	0.0000	6.0000			
Commercial rivet												
✓ D3110-5RevC 		Manufactured	No			160	Each	0.0000	1.0000			
Handle Assembly												
✓ D3115-1RevB 		Manufactured	No			160	Each	0.0000	1.0000			
Bracket												
✓ D3116-7RevA 		Manufactured	No			160	Each	0.0000	5.6666			
Seal												
✓ D3116-9RevA 		Manufactured	No			160	f	0.0000	6.4166			
Seal												
✓ D3121-041RevE 		Manufactured	No			160	Each	0.0000	3.0000			
Bracket Assembly												
✓ D3121-044RevE 		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												
✓ D3122-1RevC 		Manufactured	No			160	Each	0.0000	1.0000			
Lever												
✓ D3123-1RevC 		Manufactured	No			160	Each	0.0000	2.0000			
Cam												

M101237 SP

50427 SP

30355 SP

27239 SP

17463 SP

② 39183 SP

21167 SP

44541 SP

M1033617 SP

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Friday, June 26, 2009 9:20:39 AM

Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly










Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ D3124-1RevB 		Manufactured	No			160	Each	0.0000	1.0000		1053617	SP
Hook ✓ D3124-2RevB 		Manufactured	No			160	Each	0.0000	1.0000		1053617	SP
Hook ✓ D3126-1RevA1 		Manufactured	No			160	Each	0.0000	1.0000		41429	SP ✓
Bracket ✓ D3126-3RevA1 		Manufactured	No			160	Each	0.0000	1.0000		18557	SP
Bracket X D3126-5RevA1 		Manufactured	No			160	Each	0.0000	5.0000		36729	SP
Bracket ✓ D3132-042RevB 		Manufactured	No			160	Each	0.0000	1.0000		1053617	SP
Rod Weldment ✓ D3133-041RevB 		Manufactured	No			160	Each	0.0000	1.0000		1053617	SP
Rod Weldment ✓ D3135-041RevD 		Manufactured	No	-1		160	Each	0.0000	1.0000		52370	SP - Not closed
Handle Weldment ✓ D3137-045RevF 		Manufactured	No	-1		160	Each	0.0000	1.0000		52371	SP
Bracket Assembly												

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Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly




















Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ D3138-2RevC 		Manufactured	No			160	Each	0.0000	1.0000	 24341		SD
Cover ✓ D3139-1RevB 		Manufactured	No			160	Each	0.0000	1.0000	 24700		SD
Guard ✓ D3139-4RevB 		Manufactured	No			160	Each	0.0000	1.0000	 24700		SD
Guard ✓ D3140-06RevF 		Manufactured	No			160	Each	0.0000	1.0000	 48670B		48670B
Door ✓ D3141-1RevA 		Manufactured	No			160	Each	0.0000	2.0000	 34725 ①		SD ✓
Spring ✓ D3144-111RevC 		Manufactured	No			160	Each	0.0000	1.0000	 27236 ①		SD ✓
Doubler ✓ D3144-115RevC 		Manufactured	No			160	Each	0.0000	1.0000	 352372		RSC ①
Doubler X D3144-123RevC 		Manufactured	No			160	Each	0.0000	1.0000	 22021		SD
Doubler ✓ D3144-13RevC 		Manufactured	No			160	Each	0.0000	1.0000	 22025		SD
Doubler										 24723		SD

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Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly

Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ D3148-1RevB		Manufactured	No			160	Each	0.0000	2.0000			
Clevis												
✓ D3151-041RevC		Manufactured	No			160	Each	0.0000	1.0000			
Doubler Assembly												
✓ D3152-042RevB		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												
✓ D3155-041RevD		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												
✓ D3155-042RevD		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												
✓ D3156-1RevB		Manufactured	No			160	Each	0.0000	2.0000			
Bracket												
✓ D3162-041RevC		Manufactured	No			160	Each	0.0000	10.0000			
Bracket Assembly												
✓ D3162-043RevC		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												
✓ D3162-044RevC		Manufactured	No			160	Each	0.0000	1.0000			
Bracket Assembly												

10536-17  
w/o 50283 SP

39186 SP ✓

25285 SP

27178 SP

24343 SP

50297 SP

50370 SP

27348 SP

36734 SP

9/9/17 SP

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Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly

Comments:

Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ D3163-042RevD Cover Assembly		Manufactured	No			160	Each	0.0000	1.0000			
✓ D3183-042RevC1 Bracket Assembly		Manufactured	No			160	Each	0.0000	1.0000			
✓ D3203-1RevC Handle		Manufactured	No			160	Each	0.0000	1.0000			
✓ D3308-1RevA Doubler		Manufactured	No			160	Each	0.0000	2.0000			
✓ M7885/2-4-3 Rivet		Purchased	No			160	Each	0.0000	12.0000			
✓ M7885/3-4-4 Rivets		Purchased	No			160	Each	0.0000	12.0000			
✓ MS20392-2C17 Pin		Purchased	No			160	Each	0.0000	2.0000			
✓ MS20392-2C9 Pin		Purchased	No			160	Each	0.0000	2.0000			
✓ MS20392-3C21 Pin		Purchased	No			160	Each	0.0000	2.0000			

50410 SP

36736 SP

46457 SP

39187 SP

M107376 SP

M104625 SP

M18949 SP

M11784 SP

M104156 SP

2/9/17 @

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Friday, June 26, 2009 9:20:39 AM

Work Order ID: 48670B

Parent Item: D412-694-02RevC1

Parent Item Name: Door Assembly










Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ MS20426AD3-3 		Purchased	No			160	Each	0.0000	8.0000			
Rivet												
✓ MS20426AD4-5 		Purchased	No			160	Each	0.0000	4.0000			
Rivet												
✓ MS20426AD4-6 		Purchased	No			160	Each	0.0000	4.0000			
Rivet												
✓ MS21042L08 		Purchased	No			160	Each	0.0000	6.0000			
Nut												
✓ MS21042L4 		Purchased	No			160	Each	0.0000	4.0000			
Nut												
✓ MS24665-151 		Purchased	No			160	Each	0.0000	6.0000			
Gutter Pin												
✓ MS24693-S271 		Purchased	No			160	Each	0.0000	4.0000			
Screw												
✓ MS24694-C5 		Purchased	No			160	Each	0.0000	4.0000			
Screw												
✓ MS24694-S5 		Purchased	No			160	Each	0.0000	6.0000			
Screw												

M7681 SP

M4067 SP

M105144 SP

M112492 SP

M112314 SP

M14526 SP

M14478 SP

M106815 SP

M18949 SP

9/9/17 SP

See  
P10  
Page 2

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Friday, June 26, 2009 9:20:39 AM

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Parent Item Name: Door Assembly










Comments:

Start Date: 7/15/2009

Required Date: 8/3/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ MS24694-S50 		Purchased	No			160	Each	0.0000	18.0000			
Screw ✓ MS24694-S98 		Purchased	No			160	Each	0.0000	4.0000			
Screw ✓ MS27039-1-05 		Purchased	No			160	Each	0.0000	2.0000			
Screw ✓ MS27039-1-06 		Purchased	No			160	Each	0.0000	14.0000			
Screw ✓ MS27039-1-08 		Purchased	No			160	Each	0.0000	13.0000			
Screw ✓ MS35275-233 		Purchased	No			160	Each	0.0000	2.0000			
Screw ✓ MS35649-264 		Purchased	No			160	Each	0.0000	2.0000			
Nut ✓ MS35650-3252 		Purchased	No			160	Each	0.0000	2.0000			
Nut ✓ MS51859-7 		Purchased	No			160	Each	0.0000	3.0000			
Washer												

M112195 SP

M111776 SP

M3501 SP

M104289 SP

M110552

~~M112492~~ SP

M11822 SP

M11822 SP

M11735 SP

M111193 SP

7/6/11 QSP

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Parent Item Name: Door Assembly



Start Date: 7/15/2009

Required Date: 8/3/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ NAS43DD3-10  Spacer		Purchased	No			160	Each	0.0000	7.0000 			

M19347  
9/9/17 (105)

Date: Monday, 22/06/2009 11:52:20 AM  
 User: Linda Lacelle

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	DOOR ASSEMBLY
<b>Job Number</b> :	48670B		
<b>Estimate Number</b> :	12356		
<b>P.O. Number</b> :		<b>Part Number</b> :	D41269402
<b>This Issue</b> :	22/06/2009	<b>S.O. No.</b> :	
<b>Prsht Rev.</b> :	NC	<b>Drawing Number</b> :	D412-694
<b>First Issue</b> :	22/06/2009	<b>Project Number</b> :	N/A
<b>Previous Run</b> :	39169B	<b>Drawing Revision</b> :	C1
	<b>Type</b> :	<b>Material</b> :	
	SMALL /MED FAB	<b>Due Date</b> :	10/09/2009
<b>Written By</b> :		<b>Qty:</b>	1
<b>Checked &amp; Approved By</b> :		<b>Um:</b>	Each
<b>Comment</b> :	Est Rev:A 05.12.09 New Issue KJ/RF Est Rev B 06.04.18 New dwg rev. ecn781 EC Est Rev:C 06.07.10 Revised per B24659 KJ Est Rev:D 08-08-27 replace QC5 to QC14 seq.7 DD verified by:EC		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
----------------	------------------------------	----------------------

1.0	✓ DC	DOCUMENT CONTROL
-----	------	------------------



Comment: DOCUMENT CONTROL

Issue red decal labels for D412-694-02. CHG005

2.0	PG	PURCHASING
-----	----	------------



Comment: PURCHASING

 ISSUE P.O. 9004 1 X D3140-06 REV.F  
 DELASTEK

c 209/06/23 ①

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

 RECEIVE AND INSPECT FOR TRANSIT DAMAGE  
 ENSURE MATERIAL CERT AND PROCESS SHEET ATTACHED

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

5.0	✓ D314006	Door
-----	-----------	------


 Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
 Door Kit  
 Batch



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 22/06/2009 11:52:20 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0



COMPOSITE ASSY

COMPOSITE ASSEMBLY



Comment: COMPOSITE ASSEMBLY

D412-694-02 Drill Process

1- D412-694-02 Drill Process Drill (7) holes using Ø(#40) drill. Drill (3) holes top/bottom Ø(#40) for insert (do not pass thru) using B30-23000-02 as per Dwg D412-694 page 4 (view P).

2- Open (1) hole to 11/16" (0.688) for the handle using unibit. Transfer (4) Ø(#30) holes from D3151-041 to the door and c'sink from far side for the rivet. Transfer (2) holes Ø(3/16") for MS24694-C5 screw as per Dwg D412-694 page 4 (view P). Note: D3151-041 orientation in the door.

3- Open (3) holes Ø(#19) or (0.166) top/bottom of the door and c'sink Ø0.300 x 100° from the far side and D3155-041/-042 bracket assembly as per Dwg D412-694 page 4 (view P).

4- Drill Ø(#30) holes using drill Jig D3144-T7 for the doublers. Drill (2) holes in two places Ø 3/16" (0.188) for the slot opening. Router slot using D3144-T8/-T9 as per Dwg D412-694 page 2.

Note: The (12) holes for the (6) nut plates cannot be less than 0.290" from inside edge.

5- Use unibit to open (3) holes to Ø37/64" (0.578) at top/bottom insert for D3163-042 cover assembly as per Dwg D412-694 page 4 (view P).

Drill Ø(#30) outer door handle as shown in view Z-Z page 2. Open holes to Ø0.257.

6- Drill Pilot holes Ø(#1/8") for rollers using drill Jig DT8703-7. Use unibit to open holes to Ø 37/64" (0.578) for inserts as per Dwg D412-694 page 2, page 6 (view K, L, M, Q).

7- Drill Pilot holes Ø(#1/8") for rollers using drill Jig DT8703-2. Use unibit to open holes to Ø 37/64" (0.578) for inserts as per Dwg D412-694 page 2, page 6 (view H, J).

8- Drill (27) pilot holes Ø(#30) using drill Jig DT8703-9 RH for D3126 brackets as per Dwg D412-694 page 2 (view G-G). Use unibit to open holes Ø37/64" (0.578) for inserts.

9- Drill (2) Pilot holes Ø(#30) by transfer from D3152-042 bracket. Use unibit to open holes to Ø37/64" (0.578) for inserts as per Dwg D412-694 page 6 (view Q).

10- Drill (12) Ø(#30) holes from the edge of the door to opposite side for D3162-041 bracket using a long drill and keep drill perpendicular. Ensure (4) holes used from the center of the hole to top and bottom edge of the thick section of D3163-041 cover assembly. Compare hole depth with rivet in the foam as per Dwg D412-694 page 4 (view P) and (view R-R/-S-S). Drill (8) Ø(#30) holes from the edge of the door using a long drill and keep drill perpendicular. About the (4) last holes around the small square of the cover, take the measurement 0.250" from each corner of the D3163-042 cover.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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## Process Sheet

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Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0



8000528

Insert



Comment: Qty.: 55.0000 Each(s)/Unit Total : 55.0000 Each(s)

Insert

Batch

A/R Hysol EA934NA

Expiry Date:

8.0



COMPOSITE ASSY

COMPOSITE ASSEMBLY



Comment: COMPOSITE ASSEMBLY

1- Install inserts as per Dwg D412-694 page 2 (view G-G); page 6 (view H, J, L, M, Q).

2- Sand flush excess Hysol around the insert on both doors.

9.0



QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect that inserts are flush with the surface.

10.0



COMPOSITE ASSY

COMPOSITE ASSEMBLY



Comment: COMPOSITE ASSEMBLY

1. Apply Primer filler and reducer around the inserts on both doors.

A/R 11045

Primer Filler

Batch:

A/R 12375S

Reducer

Batch:

11.0



QC14

INSPECT SPRAY PAINT



Comment: INSPECT SPRAY PAINT

12.0



D31105

Handle Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Handle

Batch

13.0



D31151

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

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Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

14.0

✓ D31167

Seal



Comment: Qty.: 5.6666 f(s)/Unit Total : 5.6666 f(s)  
Seal ZX2054

Batch

15.0

✓ D31169

Seal



Comment: Qty.: 6.4166 f(s)/Unit Total : 6.4166 f(s)  
Seal ZX1267

Batch

16.0

✓ D3121041

Bracket Assembly



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)  
Bracket Assembly

Batch

17.0

✓ D3121044

Bracket Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Bracket Assembly

Batch

18.0

✓ D31221

Lever



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Lever

Batch

19.0

✓ D31231

Cam



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Cam

Batch

20.0

✓ D31241

Hook



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Hook

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:	Machine Or Operation:	Description :
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21.0	✓ D31242	Hook
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Hook

Batch

22.0	✓ D31261	Bracket
------	----------	---------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

Batch

23.0	✓ D31263	Bracket
------	----------	---------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

Batch

24.0	✓ D31265	Bracket
------	----------	---------



Comment: Qty.: 5.0000 Each(s)/Unit Total : 5.0000 Each(s)

Bracket

Batch

25.0	✓ D3132042	Rod Weldment
------	------------	--------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Rod Weldment

Batch

26.0	✓ D3133041	Rod Weldment
------	------------	--------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Rod Weldment

Batch

27.0	✓ D3135041	Handle Weldment
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Handle Weldment

Batch



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

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Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

28.0



D3137045

Bracket Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
BRACKET ASSEMBLY

Batch

29.0



D31382

Cover



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Cover

Batch

30.0



D31391

Guard



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Guard

Batch

31.0



D31394

Guard



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Guard

Batch

32.0



D31411

Spring



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Spring #204-032-734-001

Batch

33.0



D314413

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Doubler

Batch

34.0



D3144111

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Doubler  
Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0



D3144115

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Doubler

Batch

36.0



D3144123

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Doubler

Batch

37.0



D31481

Clevis



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clevis

Batch

38.0



D3151041

Doubler Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Doubler Assembly

Batch

39.0



D3152042

Bracket Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket Assembly

Batch

40.0



D3155041

Bracket Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket Assembly

Batch

41.0



D3155042

Bracket Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket Assembly

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:	Machine Or Operation:	Description :
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42.0	✓ D31561	Bracket
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Bracket  
Batch \_\_\_\_\_

43.0	✓ D3162041	Bracket Assembly
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Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)  
Bracket Assembly  
Batch \_\_\_\_\_

44.0	✓ D3162043	Bracket Assembly
------	------------	------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Bracket Assembly  
Batch \_\_\_\_\_

45.0	✓ D3162044	Bracket Assembly
------	------------	------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Bracket Assembly  
Batch \_\_\_\_\_

46.0	✓ D3163042	Cover Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Cover Assembly  
Batch \_\_\_\_\_

47.0	✓ D3183042	Bracket Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Bracket Assembly  
Batch \_\_\_\_\_

48.0	✓ D32031	Handle
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Handle  
Batch \_\_\_\_\_

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

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Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

49.0

✓ D33081

Doubler



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Doubler

Batch

50.0

✓ AN52510R6

Screw



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Screw

Batch

51.0

✓ AN52510R7

Screw



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Screw

Batch

52.0

✓ AN960JD8

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Washer

Batch

53.0

✓ AN960JD10L

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Washer

Batch

54.0

✓ AN960JD10LL

Washer



Comment: Qty.: 15.0000 Each(s)/Unit Total : 15.0000 Each(s)

Washer

Batch

55.0

✓ AN960JD416L

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Washer

Batch



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

56.0	✓ BSP45	Commercial Rivet
------	---------	------------------



Comment: Qty.: 79.0000 Each(s)/Unit Total : 79.0000 Each(s)  
Commercial Rivet

Batch

57.0	✓ BSP46	Commercial rivet
------	---------	------------------



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Commercial rivet

Batch

58.0	✓ M7885243	Rivet
------	------------	-------



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)  
Rivet

Batch

59.0	✓ M7885344	Rivets
------	------------	--------



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)  
Rivets

Batch

60.0	✓ MS203922C9	Pin
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Pin

Batch

61.0	✓ MS203922C17	Pin
------	---------------	-----



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Pin

Batch

62.0	✓ MS203923C21	Pin
------	---------------	-----



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Pin

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

63.0

✓ MS20426AD33

Rivet



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Rivet

Batch

64.0

✓ MS20426AD45

Rivet



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Rivet

Batch

65.0

✓ MS20426AD46

Rivet



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Rivet

Batch

66.0

✓ MS21042L4

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Batch

67.0

✓ MS21042L08

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Nut

Batch

68.0

✓ MS21072L3

Nutplate



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nutplate

Batch

69.0

✓ MS24665151

Cotter Pin



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Cotter Pin

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

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Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

70.0

✓ MS24693S271

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Screw

Batch

71.0

✓ MS24694C5

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Screw

Batch

72.0

✓ MS24694S5

Screw



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Screw

Batch

73.0

✓ MS24694S50

Screw



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Screw

Batch

74.0

✓ MS24694S98

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Screw

Batch

75.0

✓ MS27039105

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Screw

Batch

76.0

✓ MS27039106

Screw



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Screw

Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

77.0

✓ MS27039108

Screw



Comment: Qty.: 13.0000 Each(s)/Unit Total : 13.0000 Each(s)

Screw

Batch

78.0

✓ MS35275233

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Screw

Batch

79.0

✓ MS35649264

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

Batch

80.0

✓ MS356503252

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

Batch

81.0

✓ MS518597

Washer



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

Washer

Batch

82.0

✓ NAS43DD310

Spacer



Comment: Qty.: 7.0000 Each(s)/Unit Total : 7.0000 Each(s)

Spacer

Batch

83.0

✓ NAS43DD314

Spacer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Spacer

Batch



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 22/06/2009 11:52:20 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

84.0

✓ COMPOSITE ASSY

COMPOSITE ASSEMBLY



**Comment:** COMPOSITE ASSEMBLY

D412-694-02 Assembly Process

1- Install D3162-041 as per Dwg D412-694 page 4 (view R-R/S-S) and D3156-1 bracket as per (view T-T/U-U). Open holes to #30 (0.128) for rivet and alodine the open holes.

Note: Start installation window side. Wait to fix D3162-043/-044.

2- Install D3151-041 Doubler as per Dwg D412-694 page 4 (view P).

3- Connect D3132-042 Rod Weldment with D3122-1 Lever and D3133-042 Rod Weldment as per Dwg D412-694 page 4 (view P).

4- Assemble D3123-1 Cam with D3124-1/-2 Hook with D3155-041/-042 Bracket Assembly as per Dwg D412-694 page 4 (view P).

5- Install D3203-1 handle with D3308-1 doubler as per Dwg D412-694 page 2 (view Z-Z).

6- Install D3155-041/-042 Bracket Assembly and D3110-5 Handle as per Dwg D412-694 page 4 (view P) and page 2. Adjust rod weldment until everything works properly and looks in place.

85.0

✓ QC5

INSPECT WORK TO CURRENT STEP



**Comment:** INSPECT WORK TO CURRENT STEP

86.0

✓ COMPOSITE ASSY

COMPOSITE ASSEMBLY



**Comment:** COMPOSITE ASSEMBLY

D412-694-02 Assembly Process (Continued)

1- Install D3116-7-0680 Seal and doublers. Transfer slot opening in the seal as per Dwg D412-694 page 2 (view V-V and N).

Note: If this is the D412-694-013, wait until the VIP trim is fixed on the door.

2- Install D3110-5 Handle Assembly in the D3163-042 Cover Assembly. Ensure Handle works freely. Ensure D3163-042 cover assembly is aligned with the door edge on both sides and D3110-5 Handle works properly.

3- Transfer the holes to the cover with the hole finder. EXCEPTION: the (4) holes around the handle. Install the bracket with the holes from the small square of the cover (Ø0.250")

4- Open 15/64" (0.234) holes to D3163-042 cover assembly and D3135-041 handle weldment. Transfer D3139-1/-4 guard holes in cover assembly and drill holes for nutplate. Deburr and touch up holes with alodine as per Dwg D412-694 page 2.

5- Install MS21072-L3 Nutplate and Guard as per Dwg D412-694 page 2.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 22/06/2009 11:52:20 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOOR ASSEMBLY

Job Number: 48670B

Part Number: D41269402

Job Number:



Seq. #:

Machine Or Operation:

Description :

6- Transfer (#30) holes from D3144-13 doubler to seal and door. Ensure D3116-9-0770 is properly aligned as per Dwg D412-694 page 2 (section NN-NN). Apply 732 RTV Clear (A/R) in the hole prior to installing rivet and then in the rivet head after installation.

A/R RTV732 Clear Batch: \_\_\_\_\_ Expiry: \_\_\_\_\_

7- Install D3126 Brackets and D3138-2 Cover as per Dwg D412-694 page 2 (view G-G and NN-NN).

8- Install and assemble brackets as per Dwg D412-694 page 2 and 5 (view H, J, L, M and Q).

87.0

✓ QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

88.0

✓

COMPOSITE ASSY

COMPOSITE ASSEMBLY



Comment: COMPOSITE ASSEMBLY

1- Finish installing D3163-042 in the door.

2- Install red decal before closing cover.

89.0

✓ QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Install door on mock up helicopter to insure proper fit and function.

90.0

✓

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

91.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN #	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED JH	APPROVED H	DRAWING NO. D3140	REV. F SHEET 1 OF 7
DATE 06.10.06		TITLE DOOR	SCALE NTS
A	02.04.18	NEW ISSUE	
B	03.01.23	REMOVE -65/-81/-83; ADD -301/-303	
C	04.11.08	CHANGE DELASTEK SPEC. TEC-77; ADD PART MARKING; ADD NOTES 11, 12, 13; CHANGE ANGLE -95/-97/-98 TO 106°	
D	05.11.23	ADD -103/-104/-105/-106; REMOVE -67	
E	06.06.09	1.75 WAS 1.88, 4.75 WAS 4.13 ON -08/-07, 1.00 WAS 1.20 ON -09/-10	
F	06.10.06	ADD NOTE 14; CORRECT PART TITLE, NOW D3140-09/-92/-104 SHOWN D3140-10/-91/-103 OPPOSITE	

**RELEASED**

06.11.13

QTY -05	QTY -06	QTY -07	QTY -08	QTY -09	QTY -10	PART NUMBER	DESCRIPTION
X						D3140-05	DOOR
	X					D3140-06	DOOR
		X				D3140-07	DOOR
			X			D3140-08	DOOR
		1		X		D3140-09	DOUBLER ASSEMBLY
			1		X	D3140-10	DOUBLER ASSEMBLY
3	3					D3140-57	PAD
1	1					D3140-59	PAD
2	2					D3140-61	PAD
2	2					D3140-63	PAD
		1	1			D3140-69	PAD
		1	1			D3140-71	PAD
		1	1			D3140-73	PAD
		1	1			D3140-75	PAD
		1	1			D3140-77	PAD
		1	1			D3140-79	PAD
				1	1	D3140-85	ANGLE
1	1					D3140-87	DOUBLER
				1	1	D3140-89	DOUBLER
		1				D3140-91	DOUBLER
			1			D3140-92	DOUBLER
3	3					D3140-95	DOUBLER
1						D3140-97	DOUBLER
	1					D3140-98	DOUBLER
		1	1			D3140-99	DOUBLER
		2	2			D3140-101	DOUBLER
		1				D3140-103	DOUBLER
			1			D3140-104	DOUBLER
		1				D3140-105	DOUBLER
			1			D3140-106	DOUBLER
1	1					D3140-241	DOUBLER
1		1				D3140-301	DOUBLER
	1		1			D3140-303	DOUBLER
				5	5	MS20426AD3-4	RIVET

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**DART**

DESIGN #	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED JH	APPROVED #	DRAWING NO. D3140	REV. F SHEET 2 OF 7
DATE 06.10.06		TITLE DOOR	SCALE NTS

1

COMPOSITE LAYUP & BONDING I.A.W. DELASTEK PROCESS SPEC. TEC-77  
MATERIAL STORAGE & HANDLING TO BE I.A.W. DART QSI 006  
MAIN LAYUP USES FIBERCOTE E-761/7781 EPOXY FIBERGLASS.  
FILL WITH EPOCAST 87269 OR MAGNOBOND 77 A & B AND MA560 FOAM/ NB-51/30 FOAM

2

FINISH: DUPONT HIGHBUILD GREY PRIMER 1144-S

3

MAKE PARTS IN ACCORDANCE WITH THE FOLLOWING TOOLS/MOLDS:

PART	TOOL
D3140-05	B30-23000-01T
D3140-06	B30-23000-02T
D3140-07	B30-23000-03T
D3140-08	B30-23000-04T
D3140-57	B30-23000-57T
D3140-61	B30-23000-61T
D3140-63	B30-23000-63T
D3140-69	B30-23000-69T
D3140-71	B30-23000-71T
D3140-73	B30-23000-73T
D3140-75	B30-23000-75T
D3140-77	B30-23000-77T
D3140-79	B30-23000-79T
D3140-89	D3140-89T1
D3140-301	D3140-301T1
D3140-303	D3140-303T1

**RELEASED**

06.11.13

4

MATERIAL: 2024-T3 (QQ-A-250/4) 0.032 THICK (M2024T3S.032)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

5

MATERIAL: 2024-T3 (QQ-A-250/4) 0.020 THICK (M2024T3S.020)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

6

MATERIAL: 5052-H32/H34 (QQ-A-250/8) 0.040 THICK (M5052H32S.040)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

7

MATERIAL: POLIMEX TR75 1" THICK 4.5 LB KLEGECELL

8

ALL DIMENSIONS IN INCHES

9

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

10

MATERIAL: 6061-T6 (QQ-A-250/11) 0.063 THICK (M6061-T6S.063)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

11

DOUBLER TO SIT ON TOP OF FOAM AT THIS LOCATION

12

DOUBLER TO BE RECESSED FLUSH INTO FOAM AT THIS LOCATION

13

RUBBER STAMP WITH DART P/N D3140-05/-06/-07/-08 USING MIL-STD-130

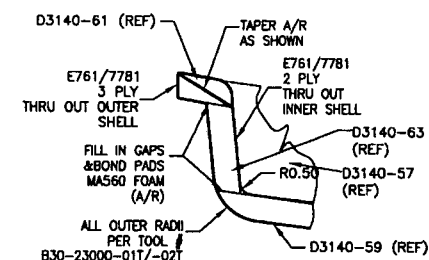
14

PARTS MUST BE SCUFFED WITH 80 GRIT SANDPAPER PRIOR TO ACID ETCH AND  
ALODINE PER DART QSI 005 4.1

F

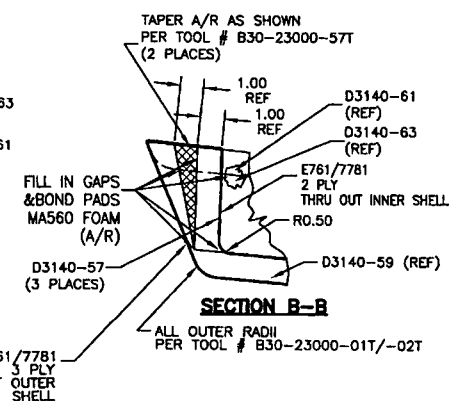
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D3140-301  
(USE D3140-303 ON -06)

06.11.13

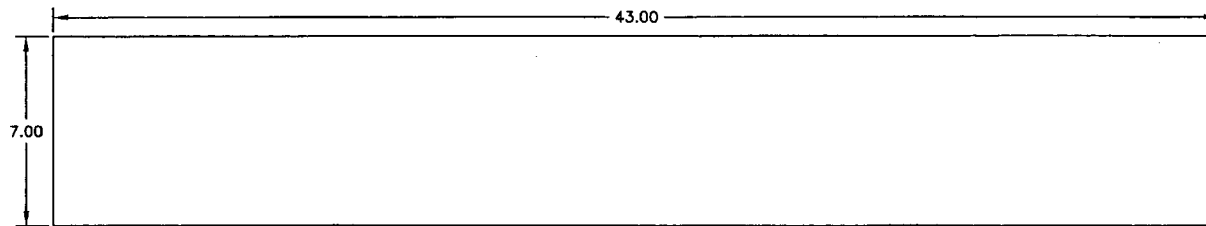


E761/778  
3 PLY  
THRU OUT OUTER  
SHELL

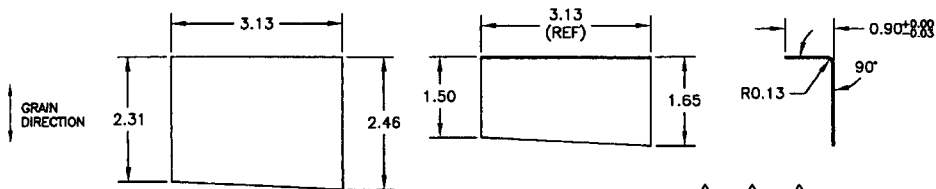


REV. F  
SHEET 3 OF 7  
SCALE  
NTS



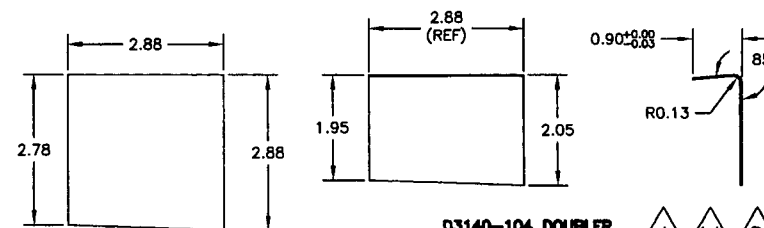
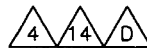


**D3140-87 DOUBLER**   
(REPLACES PREMIER P/N B30-23000-87)



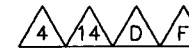
**D3140-105F FLAT PATTERN**  
(USED TO MAKE D3140-105/-106 BRACKETS)

**D3140-105 DOUBLER**  
(REF)  
D3140-106 OPPOSITE

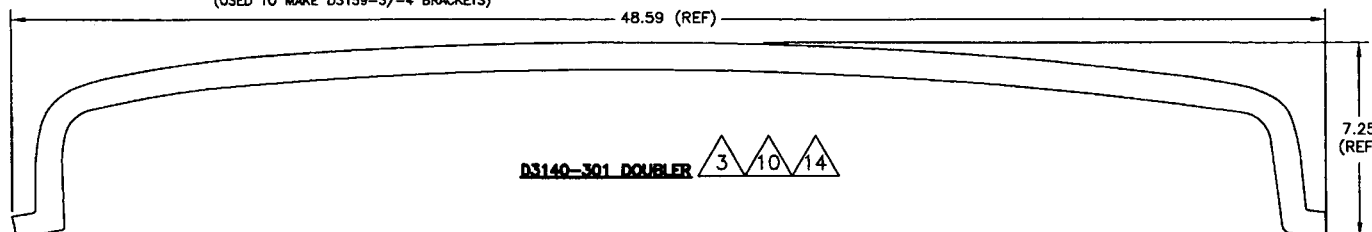


**D3140-103F FLAT PATTERN**  
(USED TO MAKE D3140-103/-104 BRACKETS)

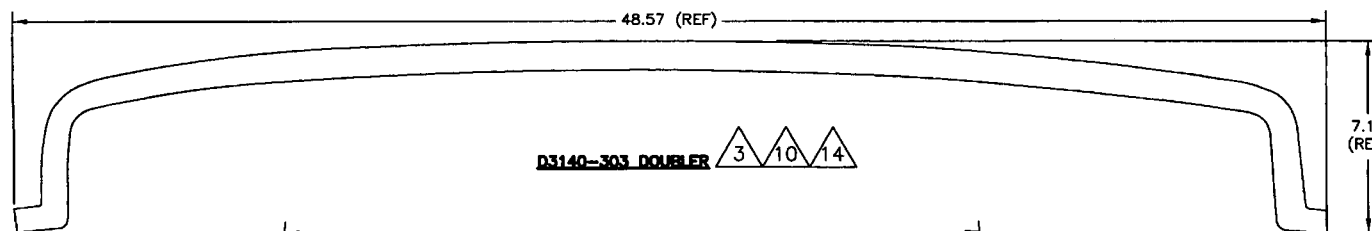
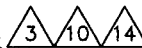
**D3140-104 DOUBLER**  
D3140-103 OPPOSITE



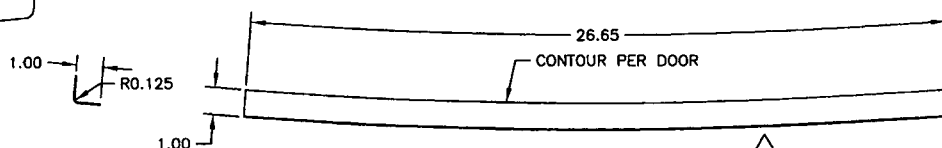
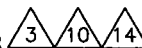
**D3159-3F FLAT PATTERN**  
(USED TO MAKE D3159-3/-4 BRACKETS)



**D3140-301 DOUBLER**



**D3140-303 DOUBLER**



**D3140-85 ANGLE**   
FLAT PATTERN: 26.65" x 1.90"  
(REPLACES PREMIER P/N B30-23000-85)

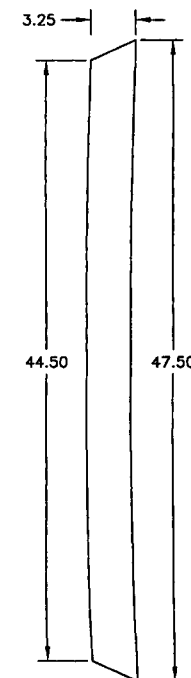
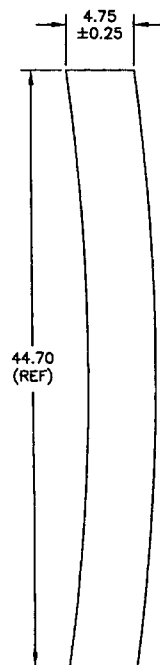
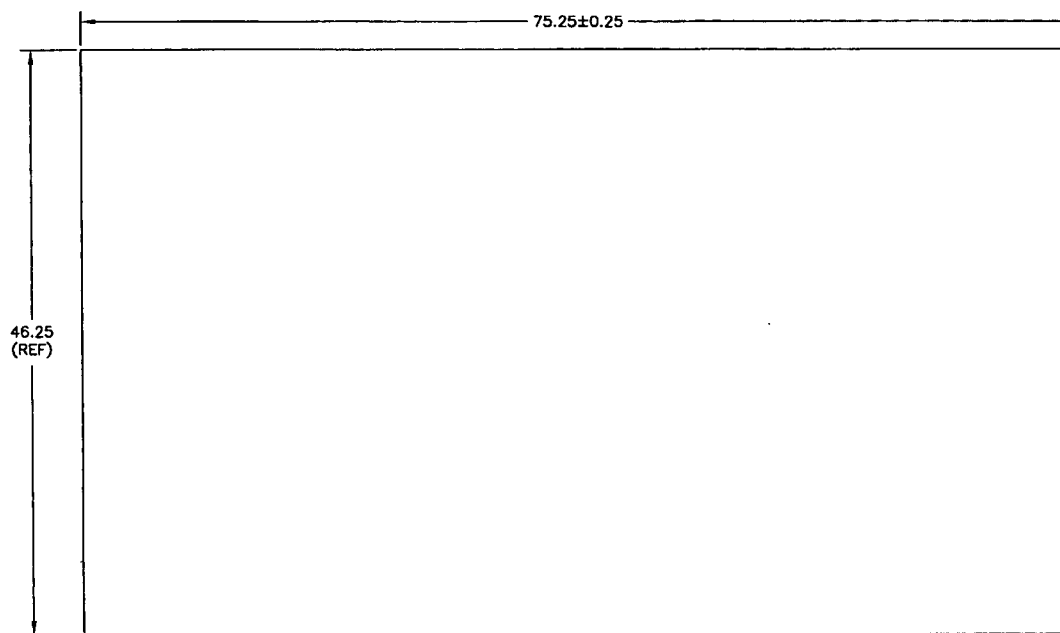
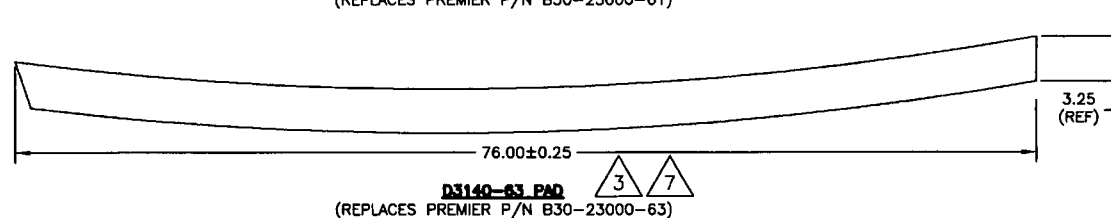
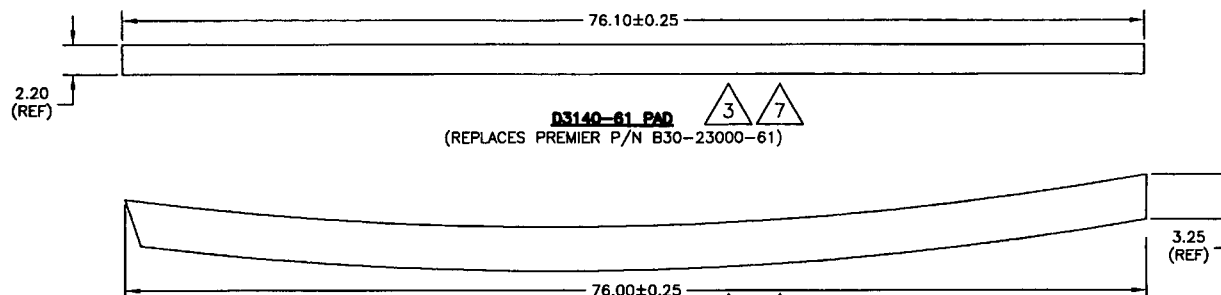
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06.11.13

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DESIGN		DRAWN BY	CB		DART AEROSPACE LTD. HAMPSHIRE, ENGLAND, CANADA
CHECKED		APPROVED		DRAWING NO.	D3140
DATE	06.10.06	TITLE	DOOR	REV. F	SHEET 6 OF 7
				SCALE	MTS



**D3140-241 DOUBLER**  
(REPLACES PREMIER P/N B30-23000-241)

5 14

RELEASED  
06.11.13

R1.00  
(2 PLACES, REF)

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		DATE		DRAWING NO.	REV. F
		06.10.06		D3140	SHEET 7 OF 7
				TITLE	SCALE
				DOOR	NTS

Qty -01	Qty -02	Qty -03	Qty -04	Part Number	Description
X				D412-694-01	DOOR ASSEMBLY
	X			D412-694-02	DOOR ASSEMBLY
		X		D412-694-03	DOOR ASSEMBLY
			X	D412-694-04	DOOR ASSEMBLY
		1	1	D3110-1	ESQUICHON
		1	1	D3110-3	HANDLE
1	1			D3110-5	HANDLE ASSEMBLY
		1	1	D3111-041	PLATE ASSEMBLY
		2	2	D3112-1	GUIDE
		1	1	D3113-1	SPRING
		1	1	D3114-1	PIVOT
1	1			D3115-1	BRACKET
		1	1	D3116-11-0180	SEAL
		1	1	D3116-5-0380	SEAL
1	1			D3116-7-0380	SEAL
1	1			D3116-9-0770	SEAL
		1		D3119-041	COVER ASSEMBLY
		1		D3119-042	COVER ASSEMBLY
		1		D3120-1	COVER
		1		D3120-2	COVER
		1		D3120-3	COVER
		1		D3120-4	COVER
3	3			D3121-041	BRACKET ASSEMBLY (ROLLER)
1	1			D3121-043	BRACKET ASSEMBLY (ROLLER)
1	1			D3121-044	BRACKET ASSEMBLY (ROLLER)
1	1			D3122-1	LEVER
2	2			D3123-1	CAM
1	1			D3124-1	HOOK
1	1			D3124-2	HOOK
		1	1	D3125-1	LEVER
		1	1	D3125-3	LEVER
		1	1	D3125-5	LEVER
		1	1	D3125-7	LEVER
1	1			D3126-1	BRACKET (SLIDER)
1	1			D3126-3	BRACKET (SLIDER)
5	5			D3126-6	BRACKET (SLIDER)
1	1			D3127-1	SPACER
		1	1	D3128-1	SHIM
		2	2	D3129-1	LEVER
		2	2	D3130-1	CLEVIS BASE
		1	1	D3131-1	STOP
1				D3132-041	ROD WELDMENT
	1			D3132-042	ROD WELDMENT
	1			D3133-041	ROD WELDMENT
1				D3133-042	ROD WELDMENT
		1	1	D3134-1	ROD
		1	1	D3134-3	ROD
1	1			D3135-041	HANDLE WELDMENT
1	1			D3137-046	BRACKET ASSEMBLY
1				D3138-1	COVER
1				D3138-2	COVER
1	1			D3139-1	GUARD
1				D3139-3	GUARD
	1			D3139-4	GUARD
1				D3140-05	DOOR
	1			D3140-06	DOOR
		1		D3140-07	DOOR
		1		D3140-08	DOOR
2	2			D3141-1	SPRING
		1	1	D3143-1	CLEVIS
		3	3	D3143-3	CLEVIS
		1		D3144-1	DOUBLER
1				D3144-3	DOUBLER
	1			D3144-105	DOUBLER
	1			D3144-107	DOUBLER
1				D3144-109	DOUBLER

Qty -01	Qty -02	Qty -03	Qty -04	Part Number	Description
1	1			D3144-111	DOUBLER
	1			D3144-115	DOUBLER
		1		D3144-117	DOUBLER
		1		D3144-121	DOUBLER
		1		D3144-119	DOUBLER
		1		D3144-123	DOUBLER
1	1			D3144-13	DOUBLER
		1		D3145-1	HINGE BRACKET
		1		D3145-2	HINGE BRACKET
		1		D3146-1	HINGE BRACKET
		1		D3146-2	HINGE BRACKET
		2	2	D3147-1	PIN
2	2			D3148-1	CLEVIS
		2	2	D3148-1	STRINGER PLATE
		2	2	D3150-1	GUIDE
1	1			D3151-041	DOUBLER ASSEMBLY
1				D3152-041	BRACKET ASSEMBLY
	1			D3152-042	BRACKET ASSEMBLY
		1	1	D3154-1	KEY
1	1			D3155-041	BRACKET ASSEMBLY
1	1			D3155-042	BRACKET ASSEMBLY
2	2			D3156-1	BRACKET
		2	2	D3157-1	SPACER
		3	3	D3159-041	BRACKET ASSEMBLY
		1		D3159-043	BRACKET ASSEMBLY
		1		D3159-044	BRACKET ASSEMBLY
10	10			D3162-041	BRACKET ASSEMBLY
1		1		D3162-043	BRACKET ASSEMBLY
1		1		D3162-044	BRACKET ASSEMBLY
1				D3163-041	COVER ASSEMBLY
	1			D3163-042	COVER ASSEMBLY
1				D3163-041	BRACKET ASSEMBLY (ROLLER)
	1			D3163-042	BRACKET ASSEMBLY (ROLLER)
1	1			D3203-1	HANDLE ASSEMBLY
2	2			D3208-1	DOUBLER
55	55	21	21	80-005-2-8	INSERT (OR SL2052-3-4)
10	10			AN625-10R6	SCREW
8	8	4	4	AN625-10R7	SCREW
		8	8	AN660-D10	WASHER
18	18	4	4	AN660-D10L	WASHER
13	13	32	32	AN660-D10LL	WASHER
6	6			AN660-D11L	WASHER
		4	4	AN660-D11	WASHER
6	6			AN660-D11L	WASHER
		2	2	AN660-D11	WASHER
		2	2	AN660-D11L	WASHER
		10	10	ASL4-632-80	INSERT
87	87	50	50	BSP45	RIVET
		12	12	FW10-032	WASHER
		6	6	FW10-032	WASHER
12	12			M7885-2-4	RIVET (OR CR3213-4-3)
		3	3	M7885-3-4	RIVET (OR CR3212-4-3)
		2	2	MS20392-1C11	PIN
		7	7	MS20392-3C15	PIN
2	2			MS20392-2C17	PIN
2	2	2	2	MS20392-2C9	PIN
2	2			MS20392-3C21	PIN
8	8			MS20429-03	RIVET
12	12			M7885/3-4	RIVET
8	8			M520426-AD4	RIVET

Qty -01	Qty -02	Qty -03	Qty -04	Part Number	Description
20	20			MS20426-AD4	RIVET
		6	6	MS21042L05	NUT
6	6	2	2	MS21042L05	NUT
		5	5	MS21042L3	NUT
4	4			MS21042L4	NUT
4	4			MS21072L3	NUT/PLATE
6	6	9	9	MS24665-151	COTTER PIN
4	4			MS24683-S271	SCREW
		2	2	MS24684-C4	SCREW
4	4			MS24684-C5	SCREW
6	6			MS24684-C6	SCREW
18	18			MS24684-S50	SCREW
		4	4	MS24684-S55	SCREW
		2	2	MS24684-S53	SCREW
		4	4	MS24684-S50	SCREW
4	4			MS24684-S58	SCREW
		2	2	MS25281-F8	CLAMP
2	2	2	2	MS27039-1-05	SCREW
14	14	12	12	MS27039-1-06	SCREW
13	13	6	6	MS27039-1-08	SCREW
		2	2	MS36205-231	SCREW
2	2			MS36275-233	SCREW
2	2			MS36849-264	NUT
		4	4	MS36850-305T	NUT
2	2			MS36850-3252	NUT
2	2	3	3	MS61869-7	WASHER
		4	4	MS61869-10L	WASHER
		14	14	NAS388-6-8P	SCREW
		15	15	NAS391B6P	WASHER
7	7			NAS40003-10	SPACER
6	6			NAS40003-14	SPACER
		2	2	NAS40003-40	SPACER

# GENERAL NOTES:

- FOR ADJUSTMENT OF LOCKING MECHANISM PRIOR TO DOOR ASSEMBLY, SET AT UNLATCH POSITION AND ADJUST SCREW INWARD UNTIL D3124-1/2 HOOK RESTS AGAINST CUTOFF SHOWN IN VIEW N.
- IF REQUIRED, NOTCH D3125-1 LEVER (REF) TO CLEAR THE D3130-1 CLEVIS BASE (REF: 2 PLACES) TO ALLOW FOR FULL TRAVEL OF THE LEVER.
- HOLES AND PARTS TO BE LOCATED PER DRILLING JGS. E30-23000-01; D3144-T1/T2-T3; D78703-3; D3162-041T1 (FOR -01 DOOR ASSY); E30-23000-02; D3144-T7/T8-T9; D78703-8; D3162-041T2 (FOR -02 DOOR ASSY); D3144-T4/T5-T6; D3118-041T1; D3112-T1/T2 (FOR -03 DOOR ASSY); D3144-T10/T11-T12; D3119-042T1; D3112-T1/T2 (FOR -04 DOOR ASSY).
- INSTALL INSERTS PER DART Q3 005. LOCATE TO MATCH HOLE PATTERN OF MATING PARTS.
- TOLERANCES ARE PER DART Q3 018 UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE IN INCHES.
- IDENTIFY D412-694-01/02/03/04 DOOR ASSEMBLIES USING D2729-1 DECALS.

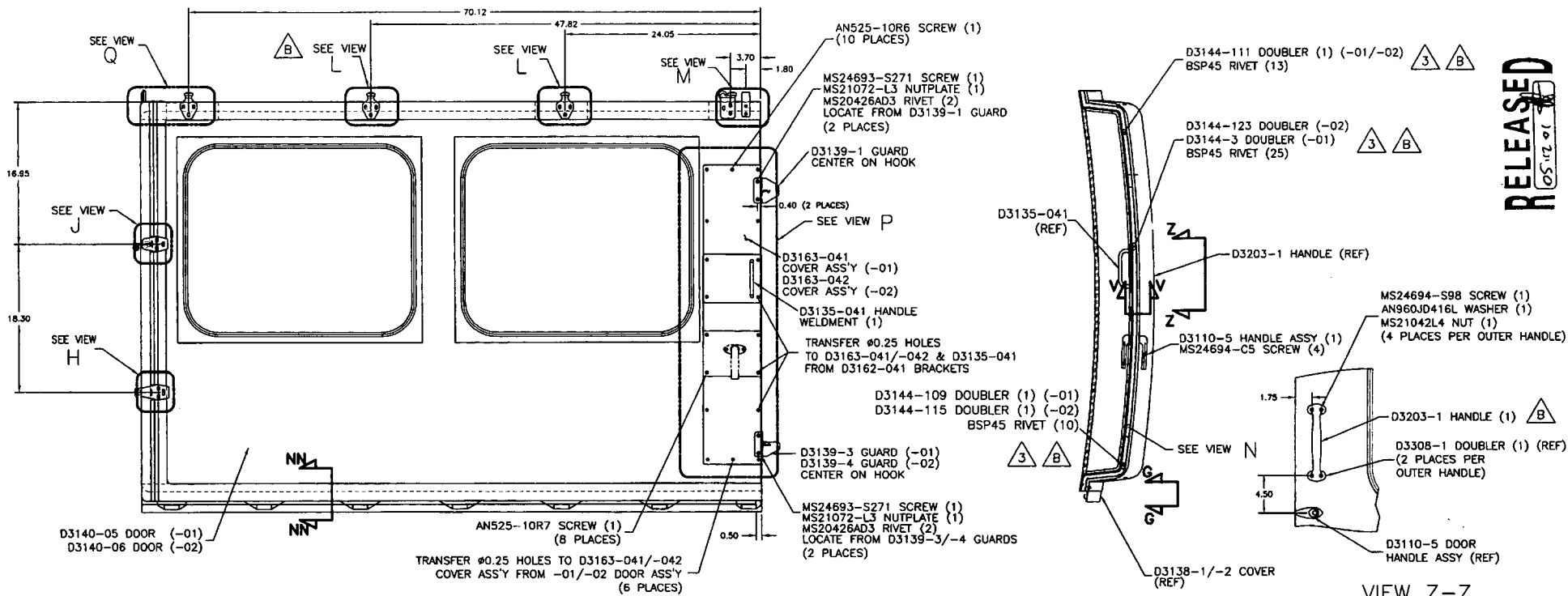
C1	06.03.28	ADD OPTION M7885/3-4
C	05.11.23	ADD D3137-045, D3162-043/-044; REMOVE D3137-041; UPDATED NOTES
B	04.10.07	UPDATE DRAWING
A	02.05.21	NEW ISSUE
DESIGN	CP	DRAWN BY RF
CHECKED	#	APPROVED
DATE	05.11.23	TITLE DOOR ASSEMBLY
		REV. C
		D412-694
		SHEET 1 OF 6
		SCALE
		NTS

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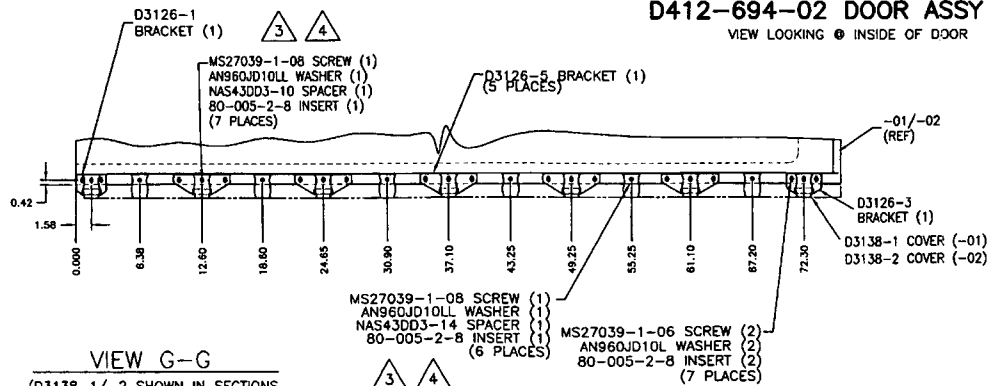
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05.12.01

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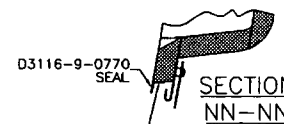
**D412-694-01 DOOR ASSY (SHOWN)**  
**D412-694-02 DOOR ASSY (OPP.)**

VIEW LOOKING @ INSIDE OF DOOR

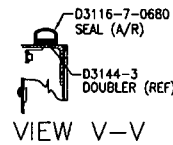
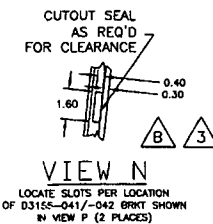


**VIEW G-G**

(D3138-1/-2 SHOWN IN SECTIONS FOR CLARITY OF HDWR LOCATIONS)



D3144-13 DOUBLER (1)  
 BSP45 RIVETS (39 PLACES)  
 TRANSFER DRILL #30 FROM DOUBLER TO DOOR  
 APPLY 732 RTV CLEAR (A/R) IN RIVET HOLE PRIOR TO INSTALLATION AND RIVET HEAD AFTER INSTALLATION



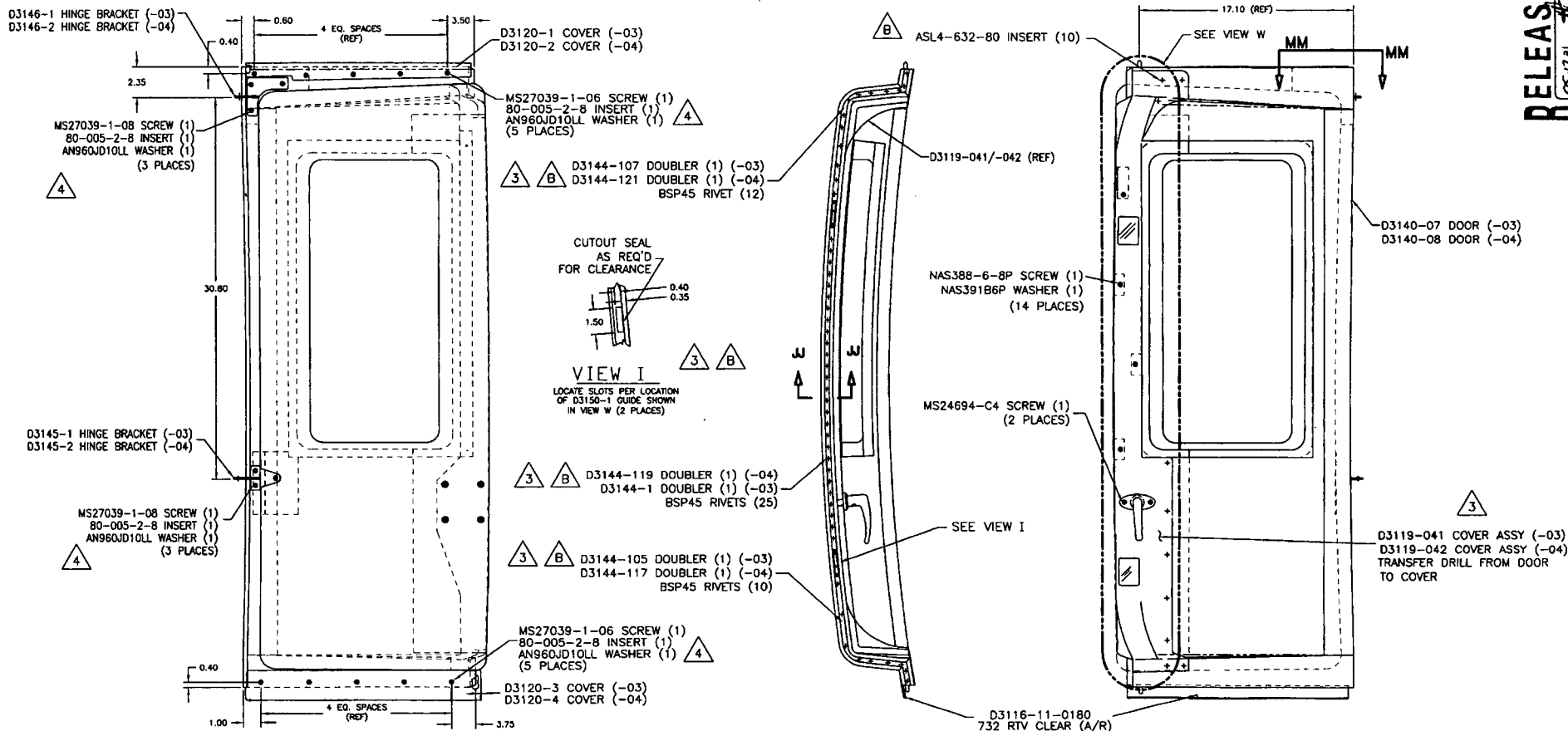
**VIEW Z-Z**  
**OUTER DOOR HANDLE INSTALLATION**

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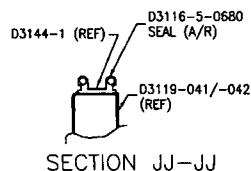
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DATE 05.11.23	TITLE DOOR ASSEMBLY	SCALE	NTS

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**D412-694-03 DOOR ASSY (SHOWN)**  
**D412-694-04 DOOR ASSY (OPP)**

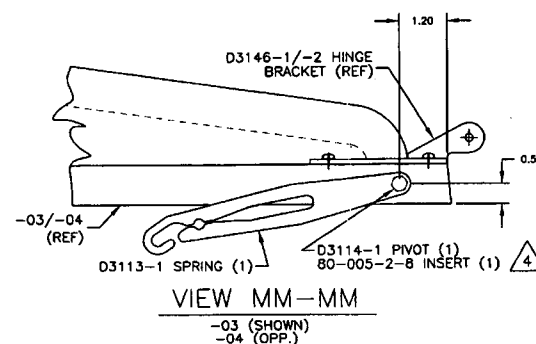
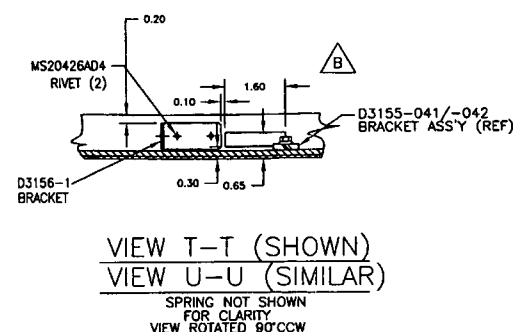
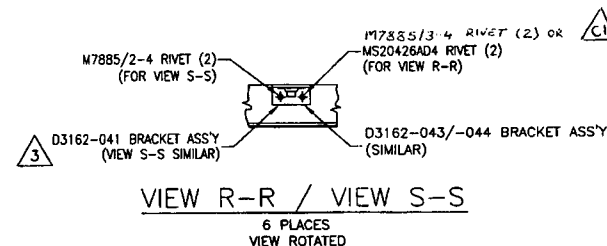
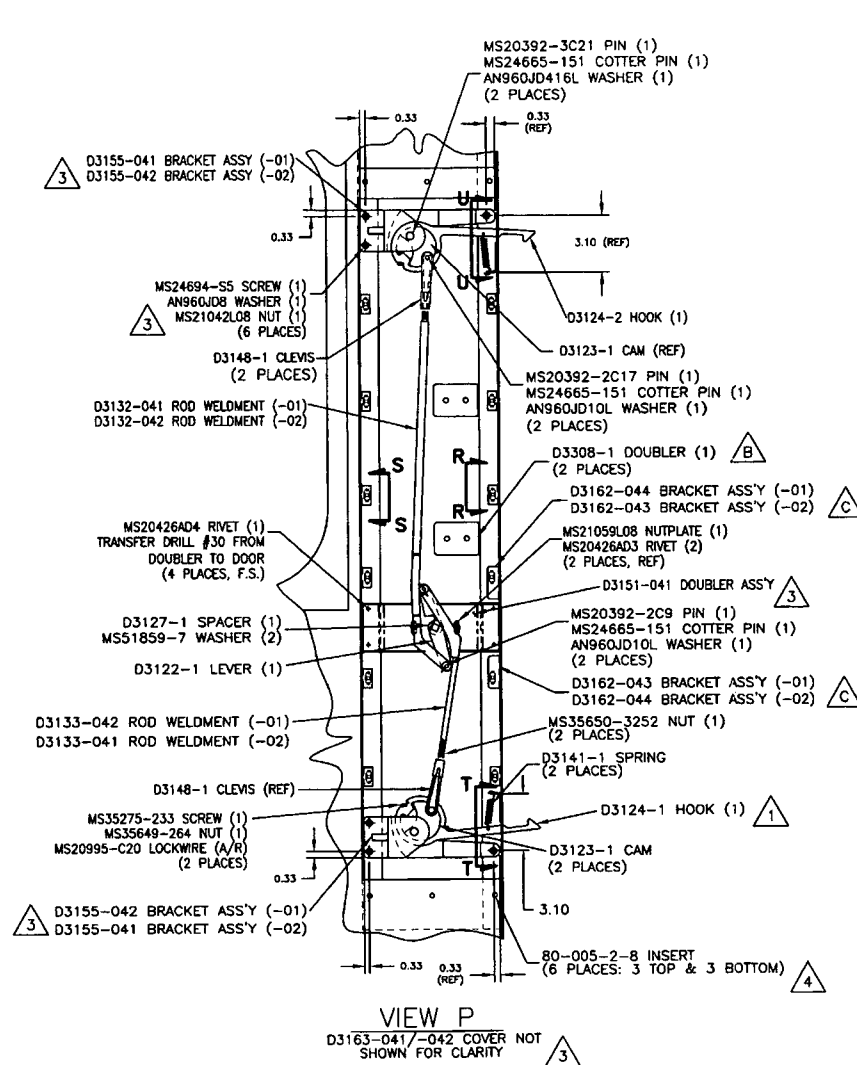


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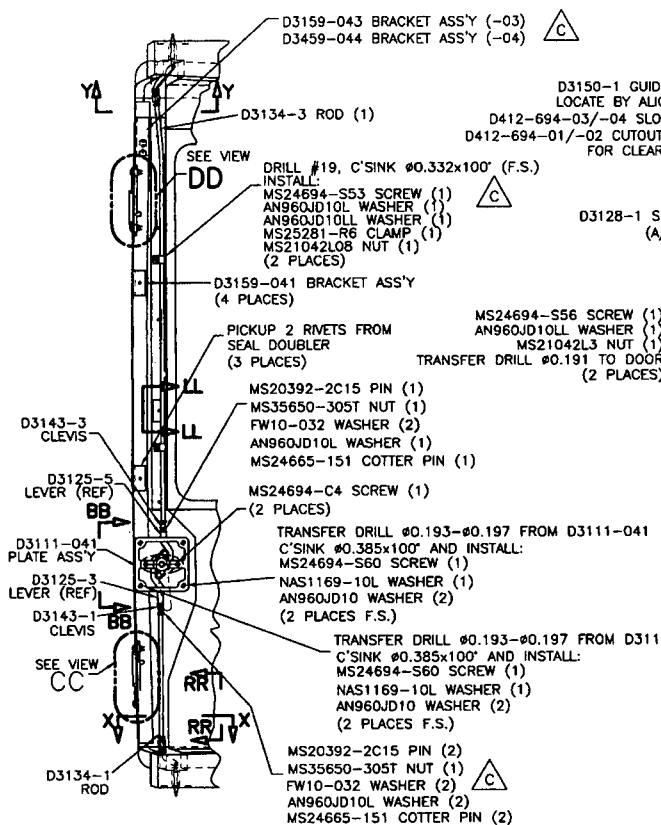
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CHECKED H	APPROVED H	DRAWING NO. D412-694	SHEET 3 OF 6
DATE 05.11.23	TITLE DOOR ASSEMBLY	SCALE NTS	

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05/12/01



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		DATE 05.11.23	TITLE DOOR ASSEMBLY		SCALE NTS

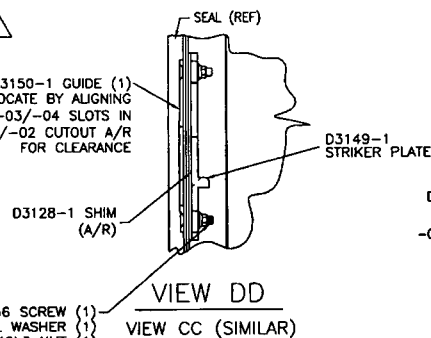


### VIEW W

D3119-041/-042 COVER ASS'Y NOT SHOWN FOR CLARITY  
SEAL ALSO NOT SHOWN FOR CLARITY

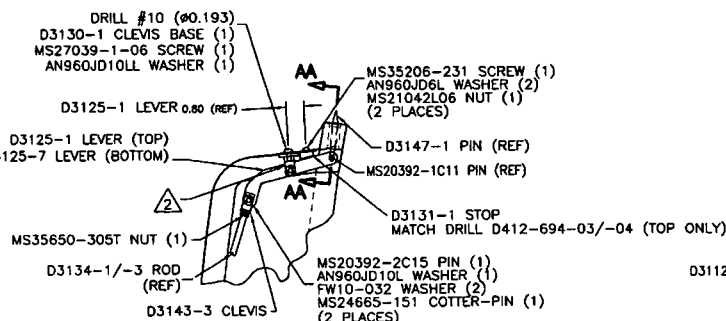
### SECTION LL-LL

(3 PLACES)  
VIEW ROTATED 90°CCW

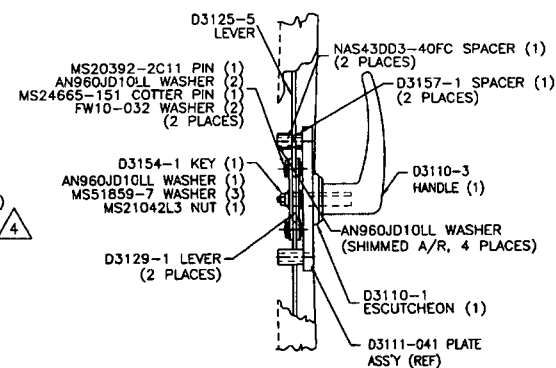


### VIEW DD VIEW CC (SIMILAR)

### SECTION AA-AA

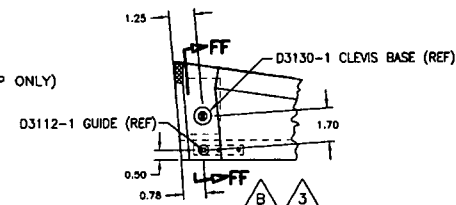


### SECTION FF-FF



### SECTION BB-BB

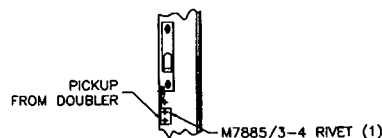
VIEW SHOWN WITH MECHANISM  
IN THE UNLOCKED POSITION  
FOR CLARITY



### SECTION X-X (SHOWN)

### SECTION Y-Y (SIMILAR)

D3125-1 LEVER NOT SHOWN FOR CLARITY



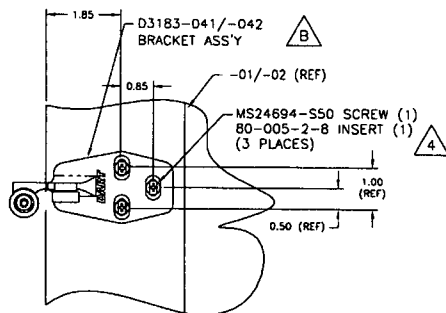
### VIEW RR-RR

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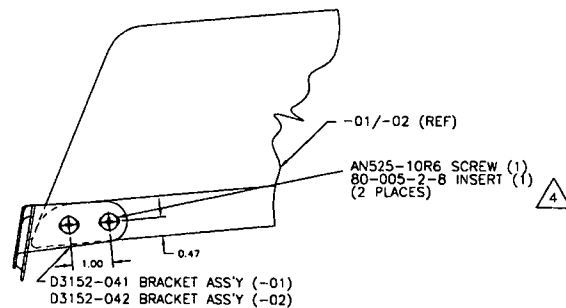
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DATE 05.11.23	TITLE DOOR ASSEMBLY	SCALE NTS	

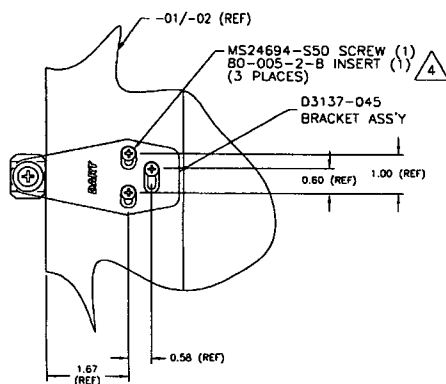
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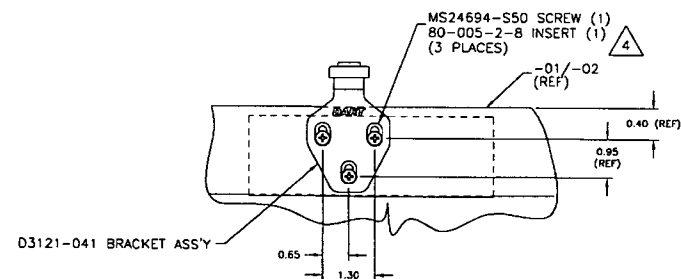
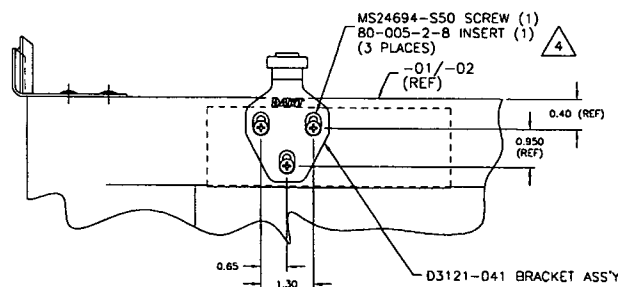
VIEW J



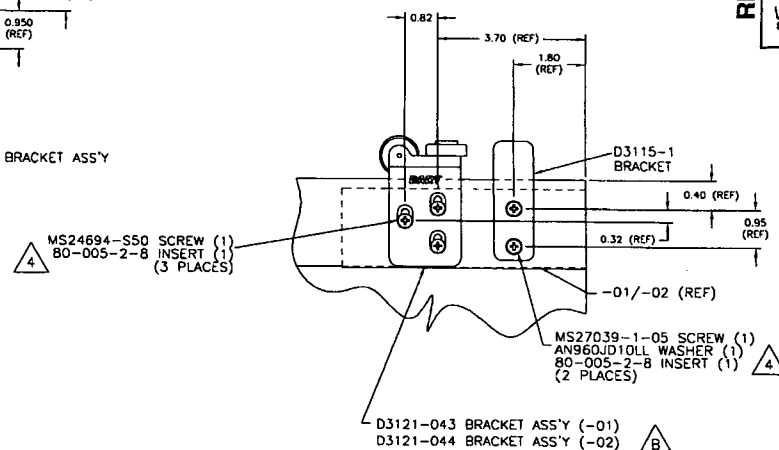
VIEW Q



VIEW H



VIEW L



VIEW M

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DESIGN  
CP

DRAWN BY  
RF

**DART**

DART AEROSPACE LTD.  
HARRISBURG, ONTARIO, CANADA

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DRAWING NO.  
D412-694

REV. C  
SHEET 6 OF 6

DATE  
05.11.23

TITLE  
DOOR ASSEMBLY

SCALE  
NTS



**Chris Provencal**

---

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** October 6, 2009 4:15 PM  
**To:** 'Chris Provencal'  
**Cc:** 'Dan Stow'; 'Bill Beckett'; 'Mike Petsche'; 'L Lacelle'  
**Subject:** RE: Devation D412-694-01/-02

Chris,

Considering the timeline on the adhesive and delivery for the door, then I think substituting the ALS4-1032-130 inserts is probably the best thing to do at this point. I would like to see the screws installed with RTV or Proseal or Sikaflex to prevent moisture egress into the door over time. I expect that this cover will come on and off quite frequently as the operator adjusts and inspects the door and would have preferred to see us stick to the potted inserts had time permitted because I believe they have chance of spinning. It would have also been my preference to maintain consistency between doors manufactured by Dart.

Technically, you are correct and we should be doing a DSI to inform the customer that this substitution has been made on his door and that the parts list doesn't match the IIN/ICA. However, the chances of this piece of paper ending up in the hands of the guy who discovers that there is a deviation on these inserts is somewhere between slim and none and so for the effort, I don't think its worth it. You've got better things to do.

My apologies for appearing to be difficult, but from the Ivory Tower here in Calgary, I clearly didn't understand all of the issues and the time constraints involved.

David

PS. Make sure you give Russ a big hug for me ... Sounds like he needs it

---

**From:** Chris Provencal [mailto:cprovencal@dartaero.com]  
**Sent:** Tuesday, October 06, 2009 1:25 PM  
**To:** 'David Shepherd'  
**Cc:** 'Dan Stow'  
**Subject:** RE: Devation D412-694-01/-02

According to Chantal, delivery for the hysol is 6-7 weeks.

-Chris

---

**From:** David Shepherd [mailto:dshepherd@dartaero.com]  
**Sent:** October 6, 2009 1:09 PM  
**To:** 'Chris Provencal'  
**Cc:** 'Dan Stow'  
**Subject:** RE: Devation D412-694-01/-02

Structurally, I don't see a problem.  
But in terms of commonality between door sets, I would prefer to pot those inserts.  
When can we get some more Hysol?

David

---

**From:** Chris Provencal [mailto:cprovencal@dartaero.com]

2009-10-06

**Sent:** Tuesday, October 06, 2009 10:52 AM  
**To:** 'David Shepherd'  
**Cc:** 'Dan Stow'  
**Subject:** Devation D412-694-01/-02

David,

They've run out of potting compound. They want to replace qty(6) 80-005-2-8 INSERTS (potted) with qty(6) ALS4-1032-130 inserts. D412-694 Rev. C, sheet 4, view P: the (6) inserts are located along the top and bottom edge of the cover plate. My main concern would be whether they can install these without damaging the composite, and whether it would hold. However (a) they use similar inserts to attach the floor into the 350 spacepod and (b) they use similar ALS4-632-80 inserts on the D412-694-03/-04 door. I would therefore conclude it is acceptable by comparison. I've attached marked up dwgs for reference.

Is this acceptable? Like the other deviation they need this ASAP!

Sincerely,  
**Christopher Provencal**  
**DART** Aerospace Ltd.

[cprovencal@dartaero.com](mailto:cprovencal@dartaero.com)

Tel: (613) 632 5200

Fax: (613) 632 9311

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Version: 8.5.420 / Virus Database: 270.14.4/2417 - Release Date: 10/06/09 06:50:00